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Revision of the old world daphnia (Ctenodaphnia) similis group (Cladocera: Daphniidae)

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Abstract

Copyright © 2016 Magnolia Press.Species of the genus Daphnia O.F. Müller, 1785 (Cladocera: Daphniidae) have become very important models in evolutionary biology research. Previous morphological and genetic evidence suggests that numerous closely related "species groups" exist within the subgenus Daphnia (Ctenodaphnia) Dybowski & Grochowski, 1895, containing both described and undescribed species. The Daphnia similis group is among these species groups. The aim of the present paper is to revise the taxonomy of the Daphnia (Ctenodaphnia) similis group in the Old World with both morphological and genetic evidence (based on mitochondrial COI and 12S rRNA genes). We found that there are at least four species in the Old World D. similis species group: D. similis Claus, 1876; D. sinensis Gu, Xu, Li, Dumont et Han, 2013; D. similoides Hudec, 1991 and D. inopinata sp. nov. These four taxa of the similis-group, confused previously with D. similis, have different distributional ranges in the Old World, from extremely wide, spanning several biogegraphic regions (as D. sinensis), to regional endemics (D. similoides) and even species known so far from a single locality (D. inopinata sp. nov.). The Daphnia similis group provides another example in the cladocerans whereby the study of males yields more valuable characters for taxonomy than the study of parthenogenetic females.

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Keywords

Anomopoda, Crustacea, Daphnia, Distribution, New species, Taxonomy